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ABSTRACT

Proceeding from the hypothesis that cable television (CATV) is one of the most significant developments in modern America, this booklet examines the medium itself and then devotes special attention to the capacity of CATV to serve the First Amendment interest in diversity of expression. The opening section deals with the size and growth of cable, its technical aspects, its potential for producing diversity of programing, dialogue, and two-way communications, and its ability to develop a sense of community and to build bridges between city and suburbs. Following this, the focus is put upon matters of civil liberties, including the status of cable as a common carrier, the regulation of CATV, and system ownership and rates. Also discussed are the questions of censorship and liability, fairness and equal time, privacy, franchising, and employment and advancement practices. (PB)

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AN ACLU GUIDE TO CABLE TELEVISION

By Fred Powledge

AMERICAN CIVIL LIBERTIES UNION
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A number of books, pamphlets, and reports have made their appearance in the recent past, all trying to explain cable television, to predict its impact on American society, and to tell involved citizens how to get the most out of the new medium.

This report represents another attempt at providing such explanations. Like the other publications before it, this effort of necessity suffers from the newness and uncertainty of the medium it is trying to describe. It differs from previous publications in its special emphasis on the capacity of cable to serve the First Amendment interest in diversity of expression.

There are many questions about cable that have not even been asked, much less answered. One of the biggest of them, of course, is whether cable really is, or will be, as important as some people say it is.

The hypothesis must be that it will be important—at least sufficiently important to warrant the attention of persons concerned about civil liberties. But the medium is complex and confusing. For that reason, the major portion of this report is given over to an effort at understanding cable itself. The concluding section deals exclusively with the civil liberties issues in cable television—at least as they are perceived at this particular point in the medium's evolution.

August, 1972

The way some people talk about it, cable television is the most exciting prospect for Americans since the development of the automobile assembly line or the discovery of powered flight. From inside an innocuous-looking box—a machine with which close to 100 per cent of the population is intimately familiar—will come something totally unprecedented. There will be entertainment, education, news, shopping, banking, library books, and police and fire protection. Cable will change the nation, change people's ways of doing things, change people themselves. It is, the way some people talk about it, very close to the fulfillment of the American Dream.

Cable television is not any of this yet, of course, although it is closer than many people suspect. And recent moves by the federal government, while not exactly giving cable a bright green light, at least have helped make the medium's future a little less uncertain; this is sure to cause cable to grow. The only questions now are how fast and where; there is no question that cable is here to stay.

Nor is there any question that cable television is very likely to have *some* profound effect on the lives of most Americans. The comparisons with automobiles and airplanes might not be too far-fetched at all. Just what *sort* of effect, and *how* profound it will be, and *when* it will be realized, are questions that cannot now be answered. But it is virtually certain that by the time cable has established itself in the cities,

towns, and suburbs of America, its effect on human life will be at least as great as that of commercial, over-the-air television—a medium that practically all knowledgeable observers agree has wrought fantastic and indelible changes in the way we work, entertain ourselves, vote, buy, and even think.

The Size of Cable

Cable television is growing at such a rapid rate that last week's statistics are already out of date. In addition, the industry began as a very loosely-organized one, and there simply are very few standards, rules, and guidelines. Until very recently little effort had been made to pull together information about the ownership, scope, operation, and variety of the cable systems already in operation, and so the confusion is compounded. Even further difficulty comes from the fact that for many millions of Americans cable is not yet available. They don't know what it is because they never see it.

What information that is available indicates that cable is growing remarkably. According to records of the Federal Communications Commission, in 1950 there were about 70 cable systems in the United States, serving about 14,000 subscribers. In January, 1968, there were 2,000 systems and 2.8 million subscribers. In January, 1970, there were 2,400 systems and more than 4 million subscribers.

Currently, the rule of thumb is that there are about 5.5 million cable subscribers in the nation. Assuming 3.1 persons per home, that would be a potential cable audience of more than 17 million people. *Television Digest*, which keeps records on the medium, stated that as of July 13, 1972, there were 2,839 cable systems in the U.S., serving approximately 5,328 communities. In addition, there were 1,663 communities where cable franchises had been let but where the cable was not yet in operation, and there were franchise applications pending in 1,538 communities.

Broadcasting magazine estimated at about the same time that there were more than 1,100 separate cable companies in the nation. The trend, however, is toward merger and consolidation. A dozen cable firms, said *Broadcasting*, held slightly more than half the subscribers, and the top 50 cable companies had three-quarters of the subscribers.

Most of the cable systems operate in smaller communities. About half of the systems, according to a summary prepared by the Federal Communications Commission, served fewer than 1,000 homes each. In the average case, a subscriber pays about $5 a month to stay on the cable. The charge for initial installation of the cable hardware is more variable, but most subscribers seem to pay around $20.

What It Is

None of this, however, explains what cable television *is*. The answer to that question is difficult, because it is likely that cable is something different to each of the 2,683 systems. It all depends, as will be seen later, on what the cable operator wants to make of his product and what the subscribers—or citizens, or city councilmen, or officials at the state and federal levels—want to make of it.

Essentially, though, cable is little more than a way to get information from a central point into a subscriber's television set. It uses wires rather than the broadcasting wavelengths employed by over-the-air television and radio. That difference is what makes cable different and it is what gives cable its potential. Most importantly, a large number of different signals may be pushed through the cable into the viewer's home, creating a potential for diversity that is unprecedented.

To appreciate the value of cable's diversity, one must go back to "regular" television and its dependence on the electromagnetic spectrum.

On a regular television set that is equipped to receive over-the-air broadcasts, there are a dozen VHF (very high frequency) channels and many more UHF (ultra high frequency) channels. Because UHF broadcasting is limited by technical considerations, most of the development of commercial TV has been on the dozen VHF channels. The VHF channels themselves are limited in number because there's just so much room in the electromagnetic spectrum, and other users of the spectrum, from taxicab fleets to the military to operators of Citizens' Band radio, would not feel kindly about giving up what they've got.

There are other technical problems that make it impossible for any community to support more than a handful of VHF

broadcasters. New York City and Los Angeles, for example, have seven VHF channels each—the most any city can have.

If anything approaching the dozen channels were used, there would be overlapping of signals. Consequently, the history of "regular" television has been shaped largely by the scarcity of its outlets. It is because of that scarcity that the U.S. government, mostly through the Federal Communications Commission but also through Congress and the White House's Office of Telecommunications Policy, has taken as one of its tasks the regulation of over-the-air television.

As commercial TV grew, it became a major vehicle for selling things. And because the channels were scarce, advertisers could see vast potential markets for their wares—markets defined and encouraged by the scarcity of channels. The advertisers started thinking in terms of *mass* audiences. And what they sell on television is mass merchandise: automobiles from Detroit, soap, laxatives, dog food. When your audience is confined to two or three channels of television, you do not advertise Rolls Royces and textbooks.

It did not take long for the advertisers and the companies they represented to become more important than the people who nominally ran the networks and stations; it turned out that the *content* of the TV programs, not just the advertising, had to appeal to mass audiences, too. *Some* people might watch a performance of the Royal Ballet and then buy underarm deodorant, but *more* people would watch a formula Western and buy *more* underarm deodorant.

Since most broadcasters and advertisers seem to have arrived at a definition of "mass audience" that includes gullibility, fear of controversy, and no small degree of simple-mindedness, diversity has all but disappeared from the regular channels. For some years now it has been fashionable for persons connected with the communications business to speak of the "failure" or even the "death" of commercial, over-the-air broadcasting.

For a while, some of those who despaired of commercial TV's future looked to the emerging new medium of public television for the diversity and stimulation that they thought the nation deserved. In 1967, when the Congress was holding hearings on what was to emerge as the Public Broadcasting Act of 1967, several of those who testified offered that opinion.

One of them was Fred Friendly, the Ford Foundation's television consultant and the former CBS Television executive. Friendly told a House hearing that public television was "broadcasting's last best chance."

Subsequent political events, however, have raised serious questions about the future of public television,* and some of those same experts speak now of *cable* as the potential cure. In some cases, even their wording is the same. Fred Friendly was asked, in an interview in early 1972, about the Ford Foundation's interest in cable, and he replied:

"Our chief interest is not to let this last best chance get all gobbled up and pre-empted, as radio and television did, so that when people finally knew what radio and television could do, it was too late to do anything about it."

Friendly was reminded that he had used Lincoln's phrase, "last best chance," five years before when talking about public television. "That's right," he said. "I'm just saying now that public television alone isn't going to make it."

The Wires Themselves

If we indeed are looking for a "last best chance" in communications, it would be logical to look for that chance in a medium where diversity, and not scarcity, was the rule. Because cable television operates on wires, that diversity is possible.

The form of cable most in use now, and the one likely to remain as the standard in this country, works essentially this way:

Signals enter the cable system at what is called its "head-end." This is where over-the-air signals are brought in by antenna, and it also is where the system might put on its own locally-originated material. From the head-end, the signals go out into the community on trunk wires. At various intervals, the trunk wires are tapped by individual wires that run into each subscriber's home, where they are physically connected to tuning devices in the television set. In schematic form, the setup resembles the veins of a leaf or the branches of a tree. The wires may be strung from utility poles, or they may be laid underground.

Because electronic impulses lose their strength as they travel through conductors, there is a need to add amplifiers

**For a discussion of those events, see the ACLU Report,* Public Television: A Question of Survival, *published in April, 1972, by Public Affairs Press, Washington.*

to the trunk lines. (There is, of course, a great deal more hardware involved, from filters to attenuators, but an understanding of their functions is not necessary to a basic understanding of cable.)

A signal *could* be carried from the head-end into the subscriber's home on the simplest sort of wire—ordinary lamp cord would do—but a special sort of wire is used that enables many signals, not just one, to travel down the cable with a minimum of interference and power loss.

This wire is called *coaxial cable*, and, although the lay person might not be familiar with it, it is not all that exotic. Coaxial cable is already in use in many homes; components of a stereo system may be wired together with it, and usually the microphone for a home tape recorder is connected to the machine with coaxial cable.

The cable is made up of an inner conductor, which is surrounded by an insulating material; an outer conductor which forms a sheath around the insulating material; and finally an outer covering of plastic or rubber. The configuration is such that interference and wasteful signal radiation are kept at a minimum. Also, and most importantly, it allows several signals to be transmitted simultaneously and without overlapping.

The different signals are put on the cable at different *frequencies* (a frequency is the number of cycles—vibrations, or waves—in a given unit of time). With coaxial cable, several signals, all of them vibrating at different frequencies, may be sent at the same time down the same wire. Such a setup is called *broadband* transmission. A tuning device at the subscriber's television set can unscramble the signals and put them on the screen with a minimum of interference, ghosts, and other problems common to over-the-air broadcasting.

The practical result is that one length of wire, not much thicker than a pencil, can be used to transmit something like 20 different channels of information from a cable head-end into a subscriber's home. Two lengths of wire, of course, could double that capacity. It is easy to see why proponents of the new medium of cable television speak in terms of infinities of entertainment and information.

Back at the Head-End

Of course, those infinities are severely limited by what the cable operator chooses to put on the cable at the head-end, and that is where the rub comes. It is that factor which is behind the curiosity, the demands, and in some cases the furor over such concepts as "public access," "common carrier status," "fairness," "equal time," and, most importantly, "diversity" on cable television.

In the early days of cable, the sort of diversity that was at issue was very elementary. When it was developing in the late 1940s and early 1950s, cable was a fairly simple solution to the problems of television reception.

In many locations around the country, television-set owners got extremely bad reception, or good reception on only one channel, because they lived on terrain where over-the-air signals were received poorly. Often mountains were in the way. Classically, what happened was that an enterprising television set salesman would erect, at some cost to himself, a tall and sensitive antenna on high ground. He would take over-the-air signals off the antenna, run them down the hill via coaxial cable, and connect the wire to the sets of those willing to pay for the service. One result would be enough income to pay for the antenna and the wire; a more important development, in the mind of the entrepreneur, would be the sale of more television sets.

Since those early days, the concept of cable has grown enormously. It no longer is a matter of providing a refined version of the over-the-air television that was there anyway. What used to be called CATV (for community antenna television) setups are now called cable *systems*. And systems are things that can be very complex.

Systems mean over-the-air broadcasting plus a host of other signals: locally-originated programs, from local news to high school basketball; a channel devoted to the time, the weather, and the barometric pressure; stock market reports; news tickers; program material that is syndicated especially for cable; at-home shopping; pay television. And cable systems are no longer confined to the suburban and rural areas where regular reception is bad; people in cities, too, are willing to subscribe to cable.

Because city reception usually doesn't suffer from the same problems that made CATV such a blessing in the rural areas, cable operators in the urban centers have had to promise

something extra—a sporting event that isn't shown on regular television; an opera; a ballet; or, in a few cases, an opportunity for people from the community to get on the cable and speak their minds.

It is because the concept of cable has grown so much—and so fast, and, until now, so lacking in clear direction—that it is no longer possible for a community, a civic group, or an enlightened citizen to merely sit back and see what develops.

Cable clearly has the potential of taking over from broadcast television as the chief supplier of information in the United States. All of a sudden, a television salesman's bright idea has become something that is very intimately related to the First Amendment.

The Sloan Commission on Cable Communications issued a report on cable in 1971* which was sober, restrained, and certainly not given to exaggeration. Yet the commission found it possible to comment that cable, which it called the "television of abundance," is "not merely an augmented television of scarcity. A whole new range of possibilities suddenly appears. The analogy is not to conventional television, but to the printing press."

What Cable Could Be

Americans are used to grandiose predictions about gadgets. Automobiles, it is said every year or so, someday will whizz on automatic pilot down faultless highways. Four loudspeakers will put you more nearly in the concert hall than two. Plastic cards will render money obsolete.

It is no different with cable. The predictions sometimes go beyond even what we take for granted in James Bond movies. There is a difference with cable, though: The movers and shakers of the cable industry seem to have the firm belief that they are on the verge of coining money (and some of them seem already to have crossed the threshold), and the gadgets *are* being built. For example:

*On the Cable: The Television of Abundance, *Report of the Sloan Commission on Cable Communications. McGraw-Hill, 1971. At the end of this report there is a bibliography of other publications of interest to those who wish a more thorough understanding of cable television.*

Considerable experimentation is going on in the field of two-way communications via cable. In Overland Park, Kansas, a suburb of Kansas City, the TeleCable Corporation has been demonstrating cable's uses as a teaching aid. A high school student who is confined to his home receives instruction via cable from his teacher, and replies through a camera and a keyboard. In another experiment run by the same corporation, a department store presented a commercial for a detergent which viewers could purchase by pushing buttons at home.

The New York Metropolitan Regional Council is building a two-way network (using microwave, not cable, signals, but cable would work just as well) so that seventeen local governments in the three-state New York metropolitan area might stay in touch with each other. The experimental program is one of several in cable communications that are sponsored by the National Science Foundation. Joseph Coates, of the foundation's Office of Exploratory Research and Problem Assessment, says that one of the goals is to "generally improve the performance of local government."

In England, two-way systems are being demonstrated that allow businessmen or others to conduct inter-city conferences without traveling. Participants confer—by microphone, camera, and television screen—with each other.

In the larger cities, cable operators are under pressure to provide something "extra." In one section of New York City served by cable, the something extra has included presentations of an off-Broadway rock opera, Columbia University's home basketball games, neighborhood newscasts, and channel time for individuals and organizations who feel they have something to say.

Akron, Ohio, appears to be the leader in another area—the number of channels available to the subscribing public. In the summer of 1972, Akron Cablevision had 17,000 subscribers, each of whom received 18 channels of information and entertainment for $5.95 a month. The offerings included transmissions of 11 "regular" channels of television and seven others, including channels showing sporting events; stock market information; time and weather; a camera focused 24 hours a day on a wire service Teletype machine; a public service channel which may be used free of charge by non-profit organizations; and a channel that shows motion pictures from 8 P.M. until 8 A.M. without commercial interruptions. Akron Cablevision currently is trying to add a two-way capacity to its system. Plans also call for increasing

the total number of channels to 64 and to use half of them for non-conventional television purposes.

The Dream of Diversity

It appears that the near future of cable will be one in which increasing emphasis is given to two-way transmission and to channel capacity. What is cited now as the extraordinary in Akron may soon be the median in the country as a whole. It is little wonder, then, that some of those who have spent time with cable's short past find themselves able to look into its future and come up with some predictions that sound genuinely exciting. These predictions invariably seem to be concerned with such topics as channel capacity, two-way capability, and public access—all of them adding up to the dream of diversity:

- The Sloan Commission on Cable Communications predicted that within the decade of the 1970s, cable will achieve this status:

> It will carry mass entertainment, some of it picked up from conventional television, some procured directly by cable television or its lessees, most of it supported from advertising revenues. It will carry special entertainment, supported by subscription, by advertising revenues, or by a combination of the two. It will transmit news and opinion, supported again by some mix of advertising and subscription revenues, but in all likelihood heavily dependent on the latter. It will possess channels dedicated to governmental and quasi-governmental services, and others . . . to educational services and to commercial services. It will possess, finally, mandated channels for the access of the general public and institutions representing the general public.

- Ralph Lee Smith, an author who has studied cable as long and as thoroughly as anyone, wrote in 1970 that cable

> is on the verge of becoming a major communications medium in its own right. . . . In addition to

> the telephone and to the radio and television programs now available, there can come into homes and into business places audio, video, and facsimile transmissions that will provide newspapers, mail service, banking and shopping facilities, data from libraries and other storage centers, school curricula and other forms of information too numerous to specify. In short, every home and office will contain a communications center of a breadth and flexibility to influence every aspect of private and community life.

• *Time* magazine predicted in 1970 that cable "could change the country's way of life." By the end of the decade, said the magazine, "CATV's two-way conduits could provide set-side shopping and banking, dial-a-movie service, a burglar and fire watch, and facsimile print-outs or even library books."

• Few knowledgeable observers would deny that cable will have a profound effect on politics. The medium might not change the ways in which candidates for elective office, awed by the power of television, have traded frankness for electronic image. But cable *might* make it easier for all candidates—and not just the well-financed ones—to make their pitches to their prospective constituents.

As it stands now, if a candidate wants to reach an audience by television, he or she usually must purchase time at the television stations' usual rates—and those rates are based on the stations' total coverage areas. Unless the candidate is running for President or Vice President, or sometimes governor or U.S. Senator, it is virtually certain that the payment will be for an audience far bigger than the boundaries of the election district. Many candidates for lesser offices do not even use television because of this problem.

The cable industry is not unaware of its value to politicians (nor, presumably, is it unaware of the opposite). In a booklet published by the National Cable Television Association, which was designed "to acquaint public officials on all levels . . . with a new audio-visual medium for reaching their constituents," there is the following passage:

"Unlike mass media which often cover areas larger than a candidate wants to reach or pay for, CATV offers access to specific, identifiable communities. It's easy to see why many national, state and local candidates make heavy use of CATV facilities, especially during elections." In another booklet for

politicians, the association adds: "Most cable operators provide free or at-cost time for political messages."*

• FCC Commissioner Nicholas Johnson, whose concern for the shortcomings of over-the-air broadcasting is well known, sees in cable a possible solution to some of the problems of communications diversity. "The best way to explain cable's potential is, in my mind, to compare the capacity of a garden hose with that of Niagara Falls," he told one audience. If the government allows cable to develop, he added, "The diversity that CATV can offer to the American family will wipe out all the artificial diseconomies that prevent commercial television from serving the needs of every single citizen."

In a speech to Ohio cable operators, Johnson called conventional television "an outmoded means of communication." In another speech, to a national convention of cable people, he declared: "The ultimate promise of cable is the rebuilding of a sense of local community . . . the promise for a perpetual flowering of the creative society."

That's quite an ultimate promise. But "the rebuilding of a sense of local community" is a promise that some proponents of cable see as entirely capable of fulfillment. As Commissioner Johnson put it on another occasion:

> Today the airways—rather than the roadways of the 1700s—provide the crucial ways for the meeting of men and minds. It is communication in all of its varieties, especially electronic communication, that holds open the hope of reinstituting the dialogue among men—carrying a message in the air or across the cable to each man's home, and thus across the barriers of race, of class, of occupation, of prejudice, of the division of peoples into city and suburb. People talking to one another—sharing their thoughts, their lives, their cultures—that is what communications through radio, television, and cable is all about.

**In yet another booklet, this one prepared for the general public, the cable association is more modest about its flirtations with politicians and their "heavy" use of the cable: "Sometimes . . . ministers, school superintendents, visiting service club speakers or candidates for public office are given the opportunity to appear on a spare cable channel to reach an audience that is too small and specialized for the local TV station to serve effectively," this booklet states.*

Dialogue

When people talk about cable's being used in such ways—used, essentially, to unite a troubled nation—they obviously are not talking about a wire that brings the time, temperature, and last season's situation comedies into the home. They are talking about *dialogue* among people and among population groups.

There are different definitions of dialogue, of course. Some people, when they speak of the potential of cable, are talking about a form of dialogue that really amounts to public access to the camera and microphone. This sort of access, of course, is possible now with conventional, commercial, over-the-air broadcasting. A television station or network could institute, within 24 hours, a policy of actively encouraging the public at large to use its facilities.

With the exception of a few shows on radio and TV in which listeners are encouraged to telephone in and talk (more often argue) with a station "celebrity" whose knowledge is usually severely limited, there is very little public access on commercial broadcasting today, nor does any knowledgeable observer believe it is in the cards. A handful of public television stations, notably those in the larger cities, have made efforts to encourage public access, with some success, but their share of the total potential audience is as miniscule as their operating budgets.

There are other indications that, at least in the larger cities, interested groups will see to it that any cable franchise that is issued will contain some provision for public access. In New York City, for example, where a maximum amount of citizen action has always been part of the scene, there are two cable operations. Each of them has been required, since July, 1971, to operate public access channels. Already the experts are assembling some tentative conclusions about the way public access can, or should, work.*

**For details on this, see Monroe Price and Charles Morris, "Public Access Channels: The New York City Experience," an appendix to the Sloan Commission's* On the Cable, op. cit. *See also "Public Access Channels: The New York Experience," a report done in March, 1972, for the Fund for the City of New York by the Center for the Analysis of Public Issues.*

Two-Way Cable

Another form of dialogue has to do with cable's potential for two-way communications. With cable, it is possible for information to go in *both* directions along the coaxial wire. A subscriber, with the proper equipment at home, could communicate back to the head-end or with other subscribers.

Actual working two-way systems are in operation in America in only a few places, and most of them are experiments. But hardly a week goes by without an announcement by a cable system of plans to build two-way capability into a town.

"Two-way capability" implies people conversing via television screens, each of them seeing and hearing the other. This is only one form of two-way communications, however, and it is not the one most likely to be incorporated into cable systems in the near future.

The reason for this is that a two-way video connection utilizes an entire channel for the return of information from a subscriber's home. And, even though cable's potential has been described as "infinite," it is not all *that* infinite. It is more likely that the cable of the not-too-distant future will have provisions for video feedback at a few selected locations—city hall, the board of education, the municipal auditorium—and that the remainder of the two-way function will be handled by means of audio channels (not too much unlike the present 'phone system) and by digital systems.

In a digital setup, a subscriber could have something like a typewriter keyboard in her or his home. The keys would operate on the binary number system, much as computers do now, sending out information via combinations of "yes-no" signals, rather than in coherent English. The subscriber could punch in a message—a reply to a question asked on television, an order for dog food advertised in the cable, a request for another showing of "Gone with the Wind"—in ordinary language. The machine would code the request into the symbols of the binary system and hold it.

The head-end, meantime, would be sending out on one of its channels an electronic impulse, coded to the various subscribers' sets. When the impulse scanned the set of a subscriber who had just asked for, say, a case of dog food, the request would be picked up by the scanner and relayed back to the head-end where, presumably, human order-takers

would do their best not to send out "Gone with the Wind" by mistake.

Individual requests for specialized information, such as the Gettysburg Address or last year's rainfall, by month, could be handled by a technique known as "frame-grabbing." Dr. Stephen H. Unger, a professor of electrical engineering at Columbia University who is studying the applications of communications technology to citizen participation, explained frame-grabbing in an interview:

A television signal consists of a sequence of frames of information, he said, just as in movie film. Normally, those frames fit together to make up a moving picture. But, said Dr. Unger, it is possible for each of the rapidly-flashing frames to contain a different picture or piece of information.

On a regular television set, of course, such a series of pictures would come out as an unintelligible mess. But, the engineer said, suppose cable receivers were set up so that various subscribers could make independent requests for information from the head-end:

"Supposing I sit at my set and I request the stock market report from yesterday, and somebody else says he wants to see a weather report, and somebody else wants to see Page 17 of the *Encyclopedia Britannica*, Volume 8. Assume you could solve the problem of transmitting in coded form what it is you want. Now, when you transmit your request for information, you also transmit, in effect, your 'address'.

"When your picture is found at the head-end and put on the line, it's sent out accompanied by information about your address. You have equipment in your home which, as your picture comes along, identifies the code and grabs that picture.

"Now, of course, all you'd see at this point is a flash of light. So you have to store the picture. There are various devices being developed which will grab that frame and keep playing it over your screen, over and over again, as long as you want it. One way is to record it on a loop of videotape and just play that loop over and over again as long as you want to see it.

"You can imagine that this has tremendous potential of all kinds. It's just a matter of imagination as to what you can do with it."

A Sense of Community

A good number of people, then, are talking about cable television as a lot more than just a device for channelling extra entertainment into the nation's darkened living rooms. Some are talking about using it for entertainment; some go even further and speak of it as a means for restoring a sense of community to the nation.

There are many who feel this way—although few of them seem to be in positions of importance in the cable industry itself. They are, however, in positions of importance *outside* cable. Cable, to an extent that is surprising, is being studied, probed, and experimented with by people from the worlds of academia, the foundations, and that broad new category that refers to itself as "the public interest." These people are worrying about cable and trying to influence its future because they believe, with Fred Friendly, that it represents a "last best chance."

Friendly is particularly interested in the idea of public access to cable. His thesis is that there is more to public access (and thus to dialogue, and thus to building a sense of community) than the mere apportionment of "free time" on the cable to interested individuals and groups.

"People think access is a soapbox," Friendly said in an interview. "And I say a soapbox in a vacuum is not access. It's a great ego trip: People say 'We're angry', and you say, 'Here, have an hour of time; do anything you want with it'. Very satisfying. 'Here's a microphone, and here's a camera'. And it looks like access, it smells like access, and it feels like access. But it isn't access, because access without funds for programming isn't access at all.

"It's like saying, 'Everybody can go to Harvard'. What good is it to go to Harvard if you haven't got $4,000 for tuition?"

Even if money were available for individuals and groups to produce their own cable offerings, said Friendly, there would be the problem of finding proper audiences for the productions. It is his feeling that cable entrepreneurs consistently seek to build their systems in areas populated by well-to-do citizens, bypassing whenever possible those who need access the most.*

**Others who study cable would argue that Friendly is wrong here. Urban ghettoes are gold-mines for cable systems, they say; the richer the suburb (and therefore the more distance between the houses) the more costly the wiring job, and the more likelihood that the cable operator will stay away.*

"The last people on the cable are the first people you want to reach," he said. "And what makes me nervous is that cable is going to cut itself to the tastes of those first people at the high end of the economic strata in the cities who have cable. And so, ten years from now, the cable system will be built up, backwards, with the people who least need to communicate having the top place.

"If I had my druthers," continued Friendly, "—if I could have any job in the world in my later years—what I would want to do is run a channel in a city that doesn't have a television station—a place like Newark, New Jersey. And if I were black I'd want to run a black channel, and I'd like to do that even if I were white.

"Newark has no television—no VHF—no cable.* It has lousy newspapers; no radio stations worthy of the name. Newark can't communicate with itself!

"If I said to you, 'There's a city without any streets', you'd say 'Shocking! How can there be a city without any streets?' Or a city without any bus lines. Here's a city that can't communicate with itself!

"I'm not an expert on this, but I can tell you in advance that a city that can't communicate is a city that's going to get into trouble."

Friendly said he would like to see an experiment in which the government or the foundations would find a town similar to Newark, but smaller, and subsidize the construction of an experimental cable system.

The wiring would be free. "And you'd study it," said Friendly, "to find out what people were watching and whether they were watching. Does the cable make it possible for the

**Not only does Newark have no television; the entire state of New Jersey "suffers from unique disadvantages in terms of information media arrangements," according to a study of cable in that state. The study commented: "New Jersey is the only state without a commercial television outlet. News and public affairs information about the state constitute a tiny fraction of such broadcasting from New York and Philadelphia. This information gap extends to other sources of public information. More New Jersey residents read the New York* Daily News *than any other newspaper; the most listened-to radio station is in New York. It is no surprise that the state should be characterized as having an identity problem."* (Crossed Wires: Cable Television in New Jersey, *a report by the Center for Analysis of Public Issues, Princeton, 1971.) Newark awarded a 25-year franchise for a cable system in 1968. There was a requirement that the franchise-holder complete the system within two years, but this was not done. In 1970 the franchise was purchased by another outfit. Newark still does not have a cable system.*

community to work better with itself? Has it taken the place of a newspaper? Has it taken the place of a VHF television station? And if such an experiment worked—in a day when there are fewer newspapers, and when television has become really an amusement enterprise—then you'd have something worth subsidizing in every community in the country.

"I don't want to make any overkill predictions, but I think that if something like that *doesn't* happen, cable is going to go just the way of radio and television. The people who get it first are going to be those who need it least, and they're going to buy what they want on it, and they will turn it into a replica of what television has become."

The Waterbury Plan

Few well-heeled backers of public access have come forward to prove that Friendly's fears about financial support are unfounded. Research is continuing, however, into the use of the least expensive video equipment by low-budget community organizations, and the cost of "free" access is expected to go down over the years.

There is at least some talk of experimentation involving the wiring of cities in which communications are bad. One of those experiments may take place in Waterbury, Connecticut.

A local group called the New Samaritan Corporation, which was established by the Connecticut conference of the United Church of Christ, currently is trying to obtain the cable franchise for Waterbury.

Connecticut is one of the few states which licenses cable television operations. According to James Richards, the deputy director of the United Church of Christ's national office of communication, state regulation is a factor in New Samaritan's decision to seek a certificate, as the franchise is called in Connecticut.

Richards said commercial operators have shied away from Connecticut. They go where there is no state regulation, leaving the state without much in the way of cable services; then they argue that Connecticut's experience proves the futility of state regulation. Adds Richards:

"Our contention all along has been that it *will* work, and you *can* make a profit in places like Connecticut; you're just

not going to be allowed to skim off lush sums of money. We think it *is* possible to operate a system in Connecticut—not to make massive amounts of money, but to make plenty of money. In our case, we would pour all the profits back into the system."

New Samaritan doesn't yet have the certificate in Waterbury, nor is it at all certain that it will get it. Several years ago, an organization called Waterbury Community Antenna, Incorporated, received the Waterbury franchise. The outfit was owned by a manufacturer of cable television hardware and several individuals, one of whom was Congressman John S. Monagan, Democrat from Connecticut's Fifth District and a long-time Waterbury politician.

Waterbury Community Antenna did not build the cable system, but rather sold the certificate to an outfit called Sammons Cablevision Corporation, an offshoot of a Texas oil company. The citizens of Waterbury continued to be without cable television.

New Samaritan feels that the previous certificate holders violated the state's law in two ways: They ignored the certificate's requirement that construction be started on the cable system within two years; and, the sale to Sammons violated a Connecticut law requiring that the State Public Utilities Commission be informed of any sale of a certificate.

New Samaritan thus is hoping, as of this writing, that the Public Utilities Commission will revoke the original certificate and will reopen the bidding on the city's cable certificate. If and when that happens, New Samaritan will be there with its own application, one that will make several unusual promises.

For one thing, New Samaritan says it will wire every home in Waterbury without charge. Not only would there be no installation fee, said Richards; there would be no monthly service fee for two or three months while subscribers were getting to know the system. Even after the establishment of a regular subscription fee, at least part of the service would be provided free to "that segment of the community that could not afford to pay for it."

The Waterbury system would start off with 27 channels, and a potential capacity of 40 channels. Two-way capability would be built in from the beginning. There would be public access and there would be all sorts of income-producing commercial gimmicks, such as direct reading of electric and water meters by cable, department store use, and so on.

The result, said Richards, would be proof that an advanced

cable television system could pay for itself within a relatively short period of time.

"If we can have everything paid for in seven or eight years," said Richards, "while at the same time we're providing the 'do-good' services like two-way communications and public access, then we think we'll be in an excellent position to go to other states, to go to the FCC, to go to community groups, and tell them: 'You can now demand all this from your commercial operators; they have no ground on which to say they can't afford to do it'."

Suburbs & City

Another close observer of the cable scene from the viewpoint of the public interest is W. Bowman Cutter, the director of the Cable Television Information Center in Washington. The center was created early in 1972 by the Urban Institute, using funds from the Ford and Markle foundations. The center's primary purpose, according to an announcement made at the time of its establishment, is "to provide policymakers in local and state governments with the information and analytical tools required to make fact-finding decisions for cable television."

Cutter sees a possibility that cable's built-in capacity for diversity might lead to greater dialogue of both the homogenous and heterogenous varieties. "You can see," he said in an interview, "a program being developed through satellites which is sold by hooking up all central-city cable systems—a program that basically appeals to central-city blacks. You can see hookups of all suburban stations, or all upper-income suburban systems, and all lower-income systems. There'll be considerably more diversity just because the audience will be segmented more.

"Now, on the other hand, the possibility is going to exist—which doesn't exist now—for all kinds of public interconnections also: chances for people to talk to each other. Cable's two big characteristics—a much greater channel capacity and the possibility of interconnection—will mean that for all practical purposes you can interconnect any systems anywhere and enable people to talk to each other in at least some way." And those groups of people, he added, *could* be white

suburbanites talking to black city residents; young people talking to old people; liberals talking to conservatives; radicals talking to liberals.

Didn't this mean, though, Cutter was asked, that the dialogue that would result would be a videotaped dialogue, rather than a real one? That the confrontations would go on in the comfort and security of one's living room, and that something would thereby be lost?

Cutter replied that he understood and worried about that point. "I have a concern that cable's going to mean that people won't see each other any more," he said. "But that word, 'any more', may not be operative. How many suburbanites have ever driven through the west side of Chicago anyway? It may be that for some purposes—cross-racial, cross-social, cross-income-group—there's probably even more chance for discourse through cable than is likely to exist now."

What Cable Could Become

Almost always implicit in the expressions of laymen concerned about the development of cable, and frequently implicit too, is the fear that if decisive action is not taken quickly, cable will grow quickly along the lines of commercial broadcasting and the public interest thus will be dealt a lethal blow.

The longer the U.S. persists in its failure to come up with a communications policy that includes cable, the more dangerous the situation will become. Ralph Lee Smith wrote in 1970 that "if the nation does not move quickly to formulate comprehensive policies, the shape of cable TV will be largely determined by the forces of the marketplace." There are few who would argue that the forces of the marketplace of commercial, over-the-air broadcasting have produced much of which the nation might justly be proud.

Already, say critics of cable, the conduct of those in the new medium's marketplace has not been of a sort to inspire confidence.

Up until now, cable has been virtually unregulated. Very few municipalities have had the time or expertise to do an adequate job of protecting their citizens when it came time to issue a cable franchise. Only a handful of the states regu-

late cable (although more of them are getting into the act now). Municipalities have received very little help from Washington; the Federal Communications Commission was generally off protecting the over-the-air broadcasters from economic harm.*

**Former FCC Commissioner Kenneth Cox remarked to a group of students in 1972 that "There's no doubt that the commission . . . tends to take on the coloration of the industry it regulates." The truth of that comment is evident to anyone who tries to understand the federal government's role in the regulation and development of cable television. The FCC's interest in cable is quite secondary to what it apparently believes to be its sacred mission to protect conventional broadcasting. As FCC Chairman Dean Burch put it in a letter in August, 1971: ". . . our objective throughout has been to find a way of opening up cable's potential to serve the public without at the same time undermining the foundation of the existing over-the-air broadcast structure."*

The FCC did not acknowledge that it had any interest in cable until the mid-Sixties, when the courts told it otherwise. Then it began a gradual assertion of jurisdiction; by 1966 it was writing rules for all cable. From the beginning, the regulations were obviously aimed at protecting conventional television from economic threats by cable. This protection was of such a magnitude, in fact, that it was referred to by observers on all sides as a "freeze" on cable's development.

The FCC, under constant pressure to end the freeze, in the summer of 1971 proposed a set of rules for dealing with cable's particular problems. Before the interested parties could really reply to the proposals, however, the White House, through its Office of Telecommunications Policy, stepped in to "help out." The helping out consisted of forcing parties to the dispute—the cable people, the broadcasters, and the holders of copyrights on broadcast material—to sit down and come to an agreement. The public was not invited to the negotiations.

On November 11, 1971, the White House announced the agreement. Essentially, it did this: Cable's growth was encouraged in suburbia and the smaller cities, but slowed in the metropolitan areas that comprise the top 50 television markets (where some two-thirds of all U.S. television viewers live). The encouragement and discouragement were effected by government regulation of "distant signals" —the number of television signals that a cable operator can legally import from distant cities. In smaller markets, cable operators can carry any distant signals they want. But in the larger markets, there are restrictions on such importation; in the largest markets (the top 50) the use of distant signals was severely limited. In all markets, cable operators were required to carry local over-the-air television signals.

The White House agreement, and subsequent FCC rules, further specified that systems in the top 100 markets would provide a non-broadcast channel for each broadcast channel utilized; and that there must be a channel for education, one for local government, and one for local public access, to be made available on a first-come, first-served, nondiscriminatory basis. Further, systems in the top 100 markets will be required to have at least 20 channels. The FCC's

Municipalities have not known what to demand and how to bargain. Prospective cable operators, needless to say, could not be expected to do anything but take advantage of such a situation. "In the past," said one report on the subject, "municipal officials have been perhaps too willing to accept the benefits to the city as formulated by applicants as the principal basis for evaluating their applications."*

The best defense for a municipality being courted by franchise-seekers seemed (and still seems, in many cases), to be to stall for more time. The following is from the notes of a March, 1971, meeting of the cable task force of the National League of Cities-U.S. Conference of Mayors:

> It was agreed that local officials must be familiar with both present capabilities and the future potential of CATV. Nevertheless, it was clear that such information, particularly with respect to the future, did not presently exist. . . .
>
> [I]t was noted . . . that the advent of a CATV proposal in any city raised many substantive and urgent questions; that if in fact the answers existed (and this was doubtful) they were not available to many of those whose responsibilities at the local level included the licensing and regulation of CATV. It was agreed that CATV held significant potential for use in urban affairs. Accordingly, concern was expressed about the conclusion of short-sighted arrangements under pressures from franchise seekers. A clear consensus was established that in dealing with such matters caution and delay was desirable.

An independent study of the status of cable television in New Jersey in 1971** underscored the point that municipalities have found themselves at a distinct disadvantage at franchise-time. The Center for Analysis of Public Issues, at Princeton, took an extensive look at the cable situation in 66 New Jersey communities and concluded:

jurisdiction over cable was recognized in June, 1972, by the U.S. Supreme Court, when it ruled, in a case involving the Midwest Video Corporation, that the commission had the authority to require operators to originate some of their own programming.

**Harvey A. Lerner and Thomas H. Moriarty, "Cities and Cable Television,"* Nation's Cities, *August, 1969.*

***Center for Analysis of Public Issues,* op. cit.

> Over the past decade, a CATV franchise frequently was relatively easy to obtain. The process typically required preparation of promotional materials, legal costs and seldom more than a few weeks of negotiations with local officials. In their bidding for franchises, cable firms had the advantage of lack of knowledge and lack of concern about cable television among local officials. The franchise question often was treated in cursory fashion, viewed [by the municipality] only as a possible source of extra revenue in the distant future. Part-time local officials, without benefit of any outside training or help, suddenly were asked to decide complicated issues of communications technology and social policy, often culminating in formal surrender of control over a major government service for a generation to come. In such circumstances, many companies secured lucrative long-term licenses to wire communities without attracting any public attention whatsoever.

The researchers were able to identify several major problems in New Jersey communities. They are problems that undoubtedly are common to American municipalities in general:

There was a lack of competition among cable operators. "Most franchises now in effect are not the product of competitive bidding," said the report; "they were given to the first company to apply." In several cases, operators would secure a franchise to supply cable to the largest community in a geographical area, and use this as leverage to pressure surrounding, smaller communities to sign up.

Most communities devoted relatively little time to the question of awarding the franchise, and the public was not invited to help in the selection of the operator.

Franchise speculation was a big problem. "Numerous franchises . . . seem to have been sought on a speculative basis, for possible later development or even re-sale," said the New Jersey study. In several cases franchise holders had missed their legal deadlines and the municipality had done little or nothing about it. (Because of inadequate or nonexistent record-keeping on the part of federal agencies, it is impossible to judge the degree to which franchise speculation has impaired the development of cable television thus far. Observers of the industry can only agree that it is likely that a number

of people have gotten rich quick off the process, while leaving scores of communities without cable service. One cable operator who is active in several sections of the nation referred to the speculators as "truly the whores of the industry.")

Much of the potential of cable has been lost because of what the Princeton researchers referred to as "shortsighted local franchise agreements" which didn't require enough of the prospective operator. Most New Jersey communities seemed satisfied with the operator's promise to pay the municipality a portion of his gross annual revenues (usually about 5 per cent), and overlooked other, vitally important items, such as:

- Channel capacity: At a time when cable television was being described as an exciting new medium with nearly infinite resources, 32 of the 66 New Jersey municipalities were requiring no minimum number of channels at all; 19 others required a dozen or less.

The experts may not be in complete agreement on what constitutes a proper number of channels for a community's cable operation, but no one would have recommended a franchise with no minimum at all, even before the FCC came up with its minimum of 20 channels. The Sloan Commission, in its report on cable, predicted that by the end of the 1970s most franchises in America would require "at least 20 channels," and that "forty-channel systems will be commonplace, or at least well within the state of the art, and that even greater capacity may be found in great metropolitan areas."

A 1972 Rand Corporation study of the cable needs of the Dayton, Ohio, metropolitan region came up with a recommendation for a two-cable setup, with "about 40 video channels" from the head-end to the subscriber, "plus a substantial capacity in the reverse direction equivalent to two or three video channels to permit program origination in remote locations and to provide future capacity to handle facsimile mail, data information storage and retrieval, viewer interrogation and response, and other services that may be perfected over the next five or ten years."

And Stephen Unger, the Columbia University electrical engineer, considers a 24-channel system "the minimal requirement." He commented: "I think it's pretty obvious: the desirability of a lot of channels. This is really the essence of why cable television is valuable."

• Length of franchise: Most of those in New Jersey were awarded for more than 20 years, and the wording of some of them seemed to indicate that they were awarded in perpetuity.

Again, most experts on cable would point out that the term of the franchise is one of the community's most potent levers for obtaining the sort of cable service it wants.

• Subscription rates: Most communities in New Jersey retained the power to regulate the installation fee and monthly cost of the cable, and in those cases the average monthly rental was about $5 per subscriber. But 21 municipalities retained no power of regulation at all.

• Technical quality: "Few cable franchises require specific levels of technical performance," wrote the Princeton researchers. "In 28 of the agreements we examined, the issue was not even mentioned. Twenty-one others included only the most general and vague standards."

• Geographic discrimination: Only 17 of the franchises specifically prohibited the cable operator from refusing to supply service to neighborhoods whose low population densities made them financially unattractive.

• Franchise transfer: Twenty-three of the municipalities studied in New Jersey retained no veto power over the sale or transfer of their franchise once it had been awarded. "Local officials frequently have watched control of their local cable systems pass to unfamiliar companies without having any legal power to intervene in such proceedings," said the report.

• Public access: Here the Princeton researchers found an appalling situation. "One of the most startling deficiencies of existing franchises," they wrote, "is failure to require many of the community services made possible through CATV. Forty-five agreements in our sample contain no requirement whatsoever that channel time be available to the community for public access broadcasting. Only seven of the sixty-six agreements contained public access requirements." There were only four franchises which required the cable operator to produce and broadcast a specified amount of locally-originated programming.

The Princeton report concluded that there was a definite need for more state and federal responsibility in the awarding of cable franchises. It said:

> . . . the performance of local government in regulating CATV can only be termed a failure. Opportunities have been overlooked; abuses have not been corrected. The industry too often has taken advantage of local government, with the viewing public the loser. For too long, the task of overseeing the growth of a billion-dollar, nationwide communications industry has been entrusted largely to local, often part-time officials. To expect sound regulation from such a primitive framework would be naive.

Corruption

It will not surprise even the most casual student of New Jersey politics to learn that municipal corruption was believed by the researchers to be another important factor in the development of cable in that state. It is likely that corruption of the elementary sort—the under-the-table payment of money or other favors by potential cable operators to the city officials responsible for awarding a franchise—has been and is widespread in the nation.

The case of Irving B. Kahn and the Teleprompter Corporation, one of the nation's largest cable outfits, is considered the most notorious example of such corruption to date. Kahn, who was Teleprompter's board chairman, was convicted by a federal jury in October, 1971, of bribing three city officials of Johnstown, Pennsylvania, in order to get the city's franchise for Teleprompter. The conviction currently is being appealed.

In the wake of the conviction, some prosecutors started looking into Teleprompter's dealings with other municipalities. But there was nothing that approached a broad-scale investigation of the company—possibly, some observers noted, because Teleprompter was simply so big. By 1972, it was the largest cable outfit in the nation, with close to 640,000 subscribers.

National investigation or not, the suspicion persists that there has been a lot of corruption in cable television.

W. Bowman Cutter, of the Cable Television Information Center, agrees with that assessment, but he adds that he

thinks "It's a phenomenon of the smaller towns and maybe the middle-sized cities." He said:

"We've been impressed in the bigger cities with the degree of concern city officials have toward developing as good a system as they can conceive of and afford, and being innovative and open about it. . . .

"We've seen some different experiences in the smaller cities. In one place we were in, the system had offered a swimming pool to all the members of the city council. There are stock deals made all the time which are claimed not to be inappropriate in any way, but that seem always to be offered to the city council members and the editors of the local newspaper.

"In the smaller cities, the power structure is unlike that in a big city, where there's a fragmented power system. In the small towns the banker, the mayor, the newspaper editor, the head of the local Chevrolet dealership, and the preacher—they all belong to the same country club. And in those areas, often it's not *dishonest* in the blatant sense of the word that when one member of the group is in on a stock deal, the others tend to go along—since they figure that the next time something comes up, they'll get theirs."

There is another form of franchise-wooing that might strike some citizens as falling within the boundaries of municipal corruption: *Newsweek* magazine reported on a junket organized for Fort Wayne, Indiana, officials by Cox Cable, one of the largest cable systems.

Fort Wayne and cities like it have been the objects of much competition among cable entrepreneurs; 23 organizations have been vying for the Fort Wayne franchise. Earlier in 1971, reported *Newsweek*, Cox flew

> six of Fort Wayne's nine city councilmen, the city clerk and two local newspaper men to visit the company's operation in San Diego—the biggest and one of the most highly regarded cable-television facilities in the U.S. After the shop talk was over, the touring Hoosiers were whisked off for a day of shopping and sight-seeing in nearby Tijuana, Mexico, before ending their junket with two days as Cox's guest at a posh hotel in Las Vegas.

Unfortunately for Cox, all six of the councilmen were voted out of office in a subsequent election. But, reported the newsmagazine in December, 1971, "one Cox bigwig last week revealed that invitations to visit the San Diego installa-

tion will soon be extended to the city's newly elected councilmen."

The Fort Wayne junket was so blatant that it made the papers, but an incalculable number of other incidents in cable franchising will probably never be revealed—because, among other reasons, municipal corruption is rarely reported. Often the local newspapers and broadcasters themselves have vested interests in the franchise fight. And often, as Cutter said, the owners and operators of the media are part of the same local power structure that decides who gets the franchise.

The Issues

The issues in cable television are almost as numerous as the channels of information that the new medium can carry into a subscriber's home.

Some of those issues are highly technical, and have not even been hinted at here. For instance, the form of cable described earlier is not by any means the only possible method. A technique known as "dial access," which is being experimented with on Cape Cod, utilizes simpler wiring; the subscriber uses a dial to tell the head-end which channel she or he wants, and the head-end sends out the wanted program.

There is the issue of compatibility of equipment—a very important one for those concerned about public access. Half-inch videotape equipment, for example, is less expensive than one-inch equipment, and thus might be more attractive to a community group that wants to produce its own programs, economically, for a cable system's public channel. But half-inch videotape is said to be difficult to edit; and, if the cable system is based on one-inch equipment, there's trouble.

The prospects for standardization of cable equipment are said to be improving. But an observer-victim of American technological ingenuity—particularly one who has lived through the "standardization" of phonograph record speeds and sizes in the Forties and Fifties, and who now is wondering about tape cassettes and cartridges—might be permitted a moment of cynicism.

There is no one place where all the issues of cable television, technical and otherwise, are discussed, although the literature currently is growing at a rate almost as rapid as

that of the industry itself. A citizen concerned about cable could receive a fairly good grounding in most of the issues, however, by consulting all of the publications listed in the bibliography.

In the discussion that follows, an attempt has been made to limit the issues to those clearly involved with civil liberties. This is quite likely an impossible task, since it could be convincingly argued that if cable is only half as important as some of its promoters claim, almost *anything* connected with it may be considered a civil liberties issue.

Even some items of obvious civil liberties importance are not treated fully here because, while they are important, they have not yet been subjected to real examination, even by the experts. The question of surveillance is an example.

It is easy to imagine that an electronic instrument in the home that is connected (along with thousands of others) to a central electronic device (one with memory features) could easily have its function reversed. It could be used to collect information *on*, as well as *for*, the subscriber.

It may as well be assumed that when cable develops to the point where a channel of pay-TV is included in the package offered to the subscriber—and thus when the head-end has reason to keep track of who wants which offering—the industry will want to compile information on who watches what. The viewing habits of millions of Americans could be entered in magnetic dossiers in no time. And prosecutors have fascinations for such lists.

Similarly, when some of cable's promises of two-way communications are fulfilled, it will be a field day for the investigators. Records could be kept on which library books individuals read, or on the activities of bank accounts. These two particular fears are not at all far-fetched; dossier-keepers already are collecting both categories of information about people who don't fit into the noncontroversial mold.

Quite a few people who are concerned about cable say they are also concerned about privacy and surveillance, but almost all of them acknowledge that the subject has not been discussed enough. James Richards, of the office of communications of the United Church of Christ, said this about privacy:

"Frankly, I don't think anybody's worried about that enough. There are cable setups that are talking about providing a burglar alarm system and a fire-watch system to the cable, so that the police and the fire department will be notified if they're needed. Once you've done that, you've set

the precedent for observing a home. I've raised that question a number of times. But it's never really been dealt with."

So, with these disclaimers, the remainder of this report will be devoted to a discussion of some of the civil liberties aspects of cable television.

Over the years, the American Civil Liberties Union has developed a considerable body of policy statements about communications—commercial television and radio, public broadcasting, and more recently cable. The policies and proposed policies have been discussed, debated, arrived at, and revised as the communications world has undergone its own various evolutions. But one thing has remained constant: the belief that the First Amendment, with its guarantees of free speech and press, can best be implemented in an atmosphere of diversity of communications.

As the U.S. Supreme Court said in a decision involving broadcasting a few years ago: "It is the purpose of the First Amendment to preserve an uninhibited marketplace of ideas in which truth will ultimately prevail." And: "It is the right of the public to receive suitable access to social, political, esthetic, moral, and other ideas. . . ."

It is in this spirit that a committee of ACLU members who are especially concerned with the communications media have been approaching the challenge of cable television. Their conclusions, some of them tentative and subject to revision, are set down here in the hope that they will serve as a set of rough guidelines—for ACLU chapters or for any other group of involved citizens, particularly those who live in areas where cable television is about to make its appearance. Some of the proposals obviously are related to the formation of a national policy toward cable communications; others are just as obviously aimed at the municipal level.

Common Carrier Status

First and foremost, the ACLU believes that cable television should be operated on a common carrier basis. This means channels of the cable service should be open to anyone willing to lease them, just as the telephone lines are open to anyone willing to pay to make a telephone call.

Common carrier status, the ACLU feels, would provide the best means for insuring diversity in the new medium. The union's stand was expressed in 1971 by Irwin Karp, a member of the union's Communications Media Committee, in testimony before the Federal Communications Commission. Karp said, in part:

> A common carrier cable system would permit a great diversity of programming. It would provide the variety now available in motion pictures, and in book and magazine publishing. It would create a vast variety of audiences, each entitled to select those works of entertainment and culture they desire to receive, just as they can make those choices in the other media I have mentioned. A common carrier system would reinvigorate and strengthen the living theatre, ballet, opera and other performing arts; it would tap the resources of libraries and information storage systems. . . .
>
> The ACLU believes that the adoption of a common carrier policy is essential because it will provide a system of communication that fulfills the needs of the First Amendment, avoiding public and private restraints on freedom of expression; and assuring full access to a meaningful marketplace of ideas. The ACLU also believes that a common carrier approach will provide the greatest diversity of programming and most efficient service of which the medium is capable. And lastly it believes the policy is inevitable and will have to be adopted someday—if not now.
>
> The history of our railroads and telegraph and telephone systems demonstrates that inevitably and inexorably these utilities evolve from a number of small companies into national networks which can only be operated and regulated as common carriers. If cable television achieves its technical potential it will be no exception. If we do not adopt a common carrier policy now, we will only have to do it 10 or 15 years from now, at a vastly greater cost to the public.

The case was put in another way by Harriet Pilpel, the chairman of the ACLU's Communications Media Committee, in a letter to FCC Chairman Dean Burch. Ms. Pilpel wrote

that "Access to this powerful medium must not be limited to the few. It must be available to all who wish to speak or to hear under the fair terms of a common carrier system if the aims and principles of the First Amendment are to be served."

It is the union's feeling that without common carrier status, cable operators would produce much of their own programming for locally-originated cable shows. If this happened, the operators would be under pressure to use much of their capital for programming, rather than for development and improvement of the basic cable service.

Even more importantly, a cable operator who is also in the programming business is under pressure to increase profits by discouraging programming from other, independent sources. The result could be the elimination of diversity in much the same way it has been eliminated from the commercial television networks.

Regulation

The ACLU feels that cable should be regulated—at least until full common carrier status is attained—by all three levels of government. Because of the importance of the medium, there should be full participation by the public in the regulatory process, and a proper division of jurisdiction is one way of achieving this. The federal government is involved because much of what is supplied on cable crosses state lines; the state government is involved in the same way it is involved in the affairs of the telephone and power utilities; the local government is involved because, despite local franchise provisions declaring non-exclusivity, a cable system is for all intents and purposes a local monopoly.

System Capacity

The cable system should have enough channels to meet all the demands placed on it by those who wish to lease time on it. Initially, it should contain at least twice the number of

channels required for relaying existing over-the-air television and radio stations in its area.

There should be at least one channel available for educational services, and at least one available for government services, with others available for lease if they are needed. All other channels should be available, on a common carrier basis, for anyone to rent or lease at fair and reasonable rates.

A "citizens' access board" or similar agency could be established by the local franchising authority to decide questions of how the channels should be allocated when the demand for them exceeds the supply.

Rates

Rates for both the subscribers to cable television and for those who use its channels should be fair, reasonable, and non-discriminatory. The franchising authority should be able to approve the system's accounting procedures; it should have access to all financial and operating records, and it should have the right of approval and periodic review of all rates.

The rates charged the subscribers should correctly reflect all the system's sources of revenue.

With a common carrier system the ACLU sees no justification for the provision of free channels or free time to governmental, educational, or nonprofit agencies. Such a practice would invite waste, and the public would have to pay for it anyway in higher rates.

Facilities

The cable system should have the option of providing studio space and origination facilities for those who wish to lease its channels. Such facilities, if provided, should be available at fair and reasonable rates.

When the system is being designed, provisions should be made for access to the head-end from suitable locations throughout the community.

Cross-Ownership

The ownership of several communications media by the same person or organization is intimately related to diversity. The ACLU currently is in the process of formulating its official policy on the entire question of cross-ownership; the thinking so far tends toward the belief that cross-ownership between or among systems (such as a firm which owns a newspaper, a television station, and also a cable outfit) would tend to inhibit competition and thus oppose First Amendment principles.

Similarly, ownership or control of several cable systems by manufacturers or distributors of cable hardware, in a way that would diminish competition or that would retard the development of better technology, would be opposed. The same would go for the ownership by a cable operator of sources of news, information, talent, or performers; or ownership of systems of distribution or syndication.

These problems, of course, would be far less important ones if cable were established on a common carrier basis.

Censorship & Liability

The ACLU believes that cable operators should have no responsibility or liability for programming and content when it is produced or distributed by others (as it would be under common carrier status). The operators therefore must be prohibited from requiring the "previewing" or censoring of material in any way.

Existing law clearly establishes the liability of persons primarily responsible for material that is broadcast that is judged to be obscene, fraudulent, defamatory, or otherwise illegal.

Fairness & Equal Time

Until such time as cable achieves its maximum potential for diversity—as it would under common carrier status—the union is opposed to the waiving of traditional fairness and

equal time requirements for cable television. As Irwin Karp put it in his testimony to the FCC:

> . . . if cable systems operate as common carriers, do not engage in programming, and provide sufficient channel capacity to give full access to all points of view, there would be no need for any of the present governmental restraints on freedom of expression and communication. Every candidate for office could secure access to the system; anyone wishing to 'reply' would have an opportunity to do so. And all sides on any political and social issue could have access to the cable system without need of a 'fairness doctrine'.

Privacy

Cable systems must provide adequate safeguards against the use of the new medium for surveillance or any other form of privacy invasion. Such safeguards could include electronic hardware that makes surveillance impossible; there also should be criminal penalties for the invasion of privacy via cable.

Technical Standards

The quality of a new cable system must be equal or superior to that of comparable systems. There should be provision for the establishment, on reasonable notice, of such refinements as two-way communications, pay television, regional and national interconnections, library retrieval of information, and other potential developments.

Duration of Franchise

The municipality or other franchising authority should try to negotiate a franchise of the shortest possible duration—ten years or less, if possible. The franchise should include

provisions for an annual report from the cable system; standard accounting procedures; open financial books; and a system of redress of grievances and review of performance.

There also should be provisions calling for the timely construction of the system, with penalties to be assessed against the operator for delays. There should be some provision for the termination of the franchise if the operator breaks too many promises.

Connections

The local government should undertake the task of procuring rights-of-way, rights to use telephone poles and underground ducts, and easements over private property to avoid excessive costs to the system and subscribers.

Program Guide

The cable operator should be required to publish a listing of what's going to be on the system. This may seem like an item of relative insignificance, but it is not. Some viewers of cable systems which offer "public access" programming have complained that they don't watch it because they have no way of knowing what is going to be on, and when.

Procurement Practices

Cable systems are heavy users of equipment and services. (The 1972 edition of "CATV Directory," published by Communications Publishing Corporation, lists approximately 100 pages of materials and services for cable TV systems, including tractors, scramblers, unscramblers, vibratory cable plows, and precast manholes; and, 61 consultants, 15 cable

brokers, and a number of firms which promise to deliver new subscribers at $18 or so a head.) Since the public pays indirectly for this equipment and these services, it is essential that fair and open purchasing policies be followed.

Employment & Advancement

Cable systems must follow nondiscriminatory employment and advancement procedures. There should be provision for on-the-job training of employees and for coordination with local educational institutions.

Awarding the Franchise

The ACLU recommends that a municipality, in awarding a franchise, adopt as its prime criterion the prospective operator's guarantee of a common carrier operation. Next should come considerations of technical quality; then, the promise of reasonable rates to subscribers and users of the channels. The next item of priority should be the franchise fee paid by the operator to the franchising authority.

The union feels that it is short-sighted for a municipality to charge a cable operator a high franchise fee. Such a get-rich-quick scheme penalizes the subscribers and channel users and inhibits the growth of the system. The fees should reflect the municipality's actual costs of administration and other services, such as the costs of enforcement; research and development, and ombudsman and complaint offices.

Before entertaining bids, the franchising authority should draw up a plan that encompasses both its short- and long-term needs and uses.

Such a plan could include: Determinations about the area to be served; special community needs; institutions (such as schools, city hall, hospitals) from which the city might want to originate its own programs; potential sources of revenue (subscriptions, fire alarms, payments for leased channels, advertising); technical requirements (such as the number of

channels to be eventually used for two-way communications); the appropriate structure of the system, including ownership and control; the way the system should be financed; and the degree of involvement by regulatory and legislative agencies.

Such a plan should be reviewed at public hearings before bids are requested. And public access to and involvement in the entire franchising process should be assured.

Glossary

Access (usually *public access*): This generally refers to the public's right to speak out on, or otherwise use, the broadcast or cable channels. The right may be spelled out in a franchise or other document, or it may be asserted or claimed by individuals or groups.

All-banding: A cable system that provides a television signal for every place on the conventional VHF dial is said to be "all-banding."

Amplifier: An electronic device that increases the strength of a signal. An example would be in a phonograph; a tiny needle relays an extremely minute electrical signal from the grooves of the record, and an amplifier multiplies that impulse until it can be heard. Many other electronic instruments, of course, also filter and clarify the signal to reduce distortion. Amplifiers are used to boost the signal strength between a cable system's head-end and its subscribers' sets.

Cable: This can mean the actual length of wire that is the heart of cable television (see *coaxial cable*), and it can mean the system itself. Either way, there are many differences between the system that uses a cable and the conventional system of broadcast television.

Cablecasting: The broadcasting of original signals by the cable operator, as distinguished from the operator's mere retransmission of signals picked off a master antenna.

CATV; CTV: When it was invented, cable television became known as "CATV," for "community antenna television." The designation was correct, for the system usually was entirely dependent upon a tall antenna that served the whole community. Now, with much more being expected of, and received from, the cable, the term "cable television" or "CTV" is probably more apt.

Channel capacity: The number of separate channels of information that a cable system might be expected to deliver from its head-end into the subscriber's home. Presently an operator might deliver a dozen, perhaps 20 video channels on a single cable. Some provide many more on single or dual cables. Some operators, whose franchises do not require them to supply a minimum number of channels, deliver very few.

Coaxial cable: The wire that carries the cable signals. About the thickness of a pencil, it has a center conductor, sur-

rounded by insulating material; the insulation is surrounded by a metal sheath that forms the other conductor. The configuration is such that a number of signals may be sent, all at different frequencies, along those two conductors, with a minimum of distortion, loss of power, and interference.

Common carrier: This refers to the idea, as advanced by the American Civil Liberties Union and others, that cable TV's channels should be available to the general public for rent or lease on a first-come, first-served, non-discriminatory basis —much as the telephone system is now, or the railroads or bus lines.

Digital return (or *digital response*): This is one of the forms of two-way cable communication. A subscriber whose television set was equipped for digital return would be able to transmit messages back to the head-end—not by speaking but by punching out information on a keyboard or a dial. The digital return equipment envisioned for cable's near future varies in its complexity, from a computer-like keyboard to a simple yes-no signalling device.

Franchise (sometimes called a *license* or *certificate*): This is the legal document that gives a cable operator the right to establish a cable system. Usually the geographic area involved is a municipality or a portion of a municipality. Frequently a franchise will set forth such considerations as the number of channels of service to be provided; the technical quality of the signals; completion date of the system; fee to be paid to the city; length of the franchise; and provisions, if any, for public access, two-way communications, and the like.

Head-end: The physical point in a cable system at which the signals—those originated by the system itself, along with those plucked from the air by antennas—get on the coaxial cable. At the other end of the system is the individual subscriber's television set.

Interconnection: The electronic splicing together of systems, usually on a temporary basis. When the national news is on regular television, for example, nation-wide interconnections take place. In cable, there could be similar interconnections —or there could be highly specialized ones. Because of the theoretically huge number of channels available, some cable experts think, it would be easy to interconnect (via satellite) channels all over the country for a program about stamp-collecting. Another channel could be used to interconnect a show about ballet, or some other offering that did not appeal

to a truly mass audience, but that did appeal to several thousand people.

Leapfrogging: The process of a cable operator's bringing in signals from distant areas, "leapfrogging" over closer signals that he may not want or that he may be prohibited from transmitting.

Microwave: This is a system of getting an audio or video signal from one point to another without using wires or regular broadcast channels. The signals are relayed along by stations which are within line-of-sight of each other. The signals are tightly focused so they do not interfere with other broadcasts and so other broadcasts do not interfere with them. A cable operator who wished to "leapfrog" a distant signal would more than likely use microwave relay.

MSO: In broadcasting parlance, this stands for "multiple-systems operators," which means firms or individuals who own several systems. When cable started, it was virtually a mom-and-pop operation. Now the trend is toward the MSOs.

Over-the-air broadcasting: This refers to "regular" television, the sort that is received in the home by way of an antenna. Sometimes it is called "radiated television."

Pay-TV: A form of cable television in which subscribers would pay specific fees in order to watch special programs or presentations or channels. There are numerous ways in which pay-TV can be accomplished; most of them would simply "lock" out the special channel until the subscriber paid for it.

Siphoning: The purchase, by cable operators for use on pay-TV, of the rights to events that might otherwise be available for conventional television or "free" cable. Most industry and consumer fears about siphoning have to do with popular sporting events.

Subscriber: The person or family who pays the basic installation fee, and then the monthly rental, and who receives in return the services of a cable company.

Two-way capacity: The capacity (either presently or in the near future) of a cable system to be used for some form of two-way communications. The two-way transmissions could be by video and audio, by audio alone, or by digital response.

VHF; UHF: These refer to the frequencies at which over-the-air television signals are broadcast. VHF stands for very high frequency; UHF is for ultra high frequency. There is

room for a dozen channels of VHF and 70 channels of UHF. The latter, because of technical problems, has never been as successful as VHF. The resulting scarcity of channels has had a great deal to do with the way in which commercial television has developed; it is that scarcity that has made the abundance of cable TV all the more attractive.

Bibliography

Cable television is confusing, frequently exasperating, and sometimes impossible for even the experts to explain properly. The medium is getting a lot of attention, though, from the writers of books, articles, and reports, and it is possible now to accumulate a fairly broad, if not complete, understanding of cable. A selection of publications is listed below.

On the Cable: The Television of Abundance. Sloan Commission on Cable Communications. New York, McGraw-Hill, 1971. This is in the nature of a comprehensive report from a group of experts to the Alfred P. Sloan Foundation. The American Civil Liberties Union (in News Release 51-71) has disagreed with several of the conclusions and recommendations of this report.

Price, Monroe, and Wicklein, John, *Cable Television: A Guide for Citizen Action*. Philadelphia, Pilgrim Press, 1972. This publication of the Office of Communication of the United Church of Christ is "intended to be a handbook for governmental officials, citizen groups, operators of cable systems and others interested in cable, to aid them in making cable broadcasting an effective means of serving the needs, tastes and desires of the citizenry." The Office of Communication itself is a source of information about cable. Its other publications include *A Short Course in Cable*, a handy pamphlet about the medium. The office is headquartered at 289 Park Avenue South, New York City, 10010.

Smith, Ralph Lee, "The Wired Nation," a special issue of *The Nation*, May 18, 1970.

Cable Television in the Cities: Community Control, Public Access, and Minority Ownership. Charles Tate, editor. Washington, The Urban Institute, 1971. The Urban Institute is a nonprofit research organization established in 1968 to "study problems of the nation's urban communities." It is situated at 2100 M Street, N.W., Washington, D.C. 20037. This publication is more or less a workbook aimed at helping minorities get a piece of the cable pie "before affluent entrepreneurs corner the market."

The annual *Survey of Broadcast Journalism*, Alfred I. DuPont-Columbia University, usually contains information on cable developments. The surveys have been published in paperback by Grosset & Dunlap, New York.

The Rand Corporation has published several studies of cable television. Most of them, unfortunately, are written in deadly think-tank style, but they are helpful nevertheless. A major recent study was *Cable Communications in the Dayton* [Ohio] *Miami Valley: Basic Report, January, 1972*. Information on it and other Rand projects may be obtained from Communications Department, the Rand Corporation, 1700 Main Street, Santa Monica, California 90406.

Black Communicator is a periodical published by the Urban Communications Center, 1630 M Street, N.W., Suite 405, Washington, D.C. 20036.

Cable Information is a newsletter issued monthly by the Cable Information Service, Broadcasting and Film Commission, National Council of Churches, Room 852, 475 Riverside Drive, New York City, 10027.

Broadcasting magazine, 1735 DeSales Street, N.W., Washington, D.C. 20036.

Television Digest, 2025 Eye Street, N.W., Washington, D.C. 20006. This publication contains perhaps the most up-to-date statistics on cable television.

CATV magazine, "the newsweekly of cable television," Communications Publishing Corporation, Englewood, Colorado 80110.

TV Communications, Communications Publishing Corporation, Englewood, Colorado 80110.

Variety, the weekly newspaper of show business, 154 West 46th Street, New York City, 10036.

"Cable Report", a monthly supplement to *Chicago Journalism Review*, 192 North Clark Street, Chicago, Illinois 60601.

Crossed Wires: Cable Television in New Jersey. A report by the Center for Analysis of Public Issues, Princeton, 1971.

A Report on Cable Television and Cable Telecommunications in New York City. Mayor's Advisory Task Force on CATV and Telecommunications. Available from the Ford Foundation, 320 East 43d Street, New York City, 10017.

Smith, E. Stratford, "The Emergence of CATV: A Look at the Evolution of a Revolution," Proceedings of the IEEE, Vol. 58, No. 7, July, 1970.

A small number of organizations are keeping close tabs on the development of cable, and most of them issue publications and reports on the subject from time to time. They include:

The Ford Foundation, 320 East 43d Street, New York City, 10017.

The Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554.

Office of Telecommunications Policy, Executive Office of the President, 1800 G Street, N.W., Washington, D.C. 20504.

The Mitre Corporation, 1820 Dolley Madison Boulevard, McLean, Virginia. This research organization has turned out reports dealing with interactive uses of cable television in such places as Washington, D.C., and the New Town of Reston, Virginia.

National Cable Television Association, 918 16th Street, N.W., Washington, D.C. 20006. This is the promotion and lobbying agency of the cable industry. Attempts to obtain interviews with, or comments from, officials of the organization in connection with this ACLU report were unsuccessful.

National Cable Television Information Center, 2100 M Street, N.W., Washington, D.C. 20037. This is a recently-established clearing house for information about cable, supported by funds from the Ford and Markle Foundations.